“Managed Solution for the Enterprise Portals”

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1. PURPOSE

The Internal Revenue Service (IRS) Modernization and Information Technology Services (MITS) is seeking information from industry relating to its need for a next-generation managed solution for IRS Enterprise Portals. The potential solution options currently range from a complete replacement of existing software and infrastructure to managed services for the existing portals. This Request for Information (RFI) is part of a market research effort to assess innovative solutions and industry capabilities that will best address the IRS need. Currently, the IRS web portals, including the Public User Portal (PUP), Registered User Portal (RUP), and Employee User Portal (EUP), are supported under several IRS contracts with various vendors that are due to expire in mid-2006. In planning for the follow-on procurement(s), the IRS is seeking innovative and cost-effective solutions that will ensure continued reliable performance, and increased efficiency and customer satisfaction. The resulting contract(s) will be performance-based with incentives/disincentives and include specific socioeconomic goals for participation by small business firms. The purpose of this RFI is to describe the general nature of the IRS need, the information desired of industry, and to provide instructions for submission of industry responses.

2. INSTRUCTIONS AND RESPONSE GUIDELINES

To assist you in understanding this request, we have provided a background of the IRS web portal environment, major components and subsystems, operations As-Is State, Federal guidelines, current and projected workload needs, and desired state and vision of the future. Following this information is the specific information, Section 7, RFI Response, that we are requesting interested parties to complete and provide in their Technical Capability Statements. A workload description can be found in Section 5.2.1.

Responses are limited to a total of 50 pages and must be completed in Microsoft Word 97 format. Page size must be "8.5 x 11", font must be 12 point or larger, and margins must be at least 1". Both sides of the paper may be used. Each side is counted unless blank. Briefly describe your company, your services, history, ownership, financial information, business size, other information you deem relevant, and respond to the specific inquiries in Section 7. Supplemental service brochures or marketing materials outlining specifications and capabilities may be submitted, and will not be counted in the overall page count limits. Provide points of contact, including name, address, phone/fax number(s) and e-mail.

We appreciate your response. It will be used solely by the IRS as market research. We will not divulge individual responses to the RFI outside of the IRS Requirements Team. When possible the Web Portal Requirements Team will conduct analysis without identifying company names with their responses. Please be informed that a Federally Funded Research Development Center (FFRDC) is assisting the IRS with this need and, along with the general nondisclosures the vendor signed with the execution of this contract, a separate and distinct nondisclosure has been signed for this need.

3. CONTACT INFORMATION

Responses must be submitted to the Contacting Officer within 30 calendar days after issuance of the RFI or no later than 3:00 pm on **Monday, April 25, 2005**. Clarification questions must be received within 5 working days after issuance of the RFI. Clarification questions in response to the RFI and final responses to the RFI may be emailed to awss.webportals@IRS.gov or faxed to the attention of: Margaret M. Hunt at (202) 283-4427. Submit 3 copies each of any supplemental hardcopy materials or electronic materials on hard media (CD, diskette) to:

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4. BACKGROUND

The Department of the Treasury and the IRS published a plan to dramatically modernize the information technology systems of the IRS. Developed in 1997, the IRS modernized systems plan prioritizes the implementation of those aspects of the plan that will directly benefit taxpayers. To implement the modernized systems plan, the IRS joined with the private sector to propose strategies and develop technologies that meet the best practices of industry and fully comply with applicable federal laws, rules, and regulations.

The growth in the IRS public web site access averaged more than 20 percent over the last several years of the 1990's. This growth in online access precipitated the need to upgrade the underlying infrastructure upon which the web site was originally constructed. The new IRS Public Portal needed to dramatically increase its user interface capabilities, speed of navigation, and delivery of services to the taxpaying public. To meet the need of modernizing the Public Portal or IRS.gov web site, the IRS selected three TIPSS contractors to submit technical and cost proposals. In June 2001, the IRS competitively awarded a contract to one of these vendors for the redesign, development and implementation of the IRS.gov web site.

The customer service component of the plan began in 1999 with the competitive award of a Prime Systems Integration Services Contract to a team of technology companies (PRIME Alliance). The IRS required a robust system infrastructure to support the business functionality identified by the IRS. This infrastructure was delivered in incremental releases over a number of years consistent with the sequencing plan for delivery of business functionality. In April 2004, the Operations, Maintenance, and Support of this infrastructure were transitioned from the PRIME Alliance contractual vehicle to a vendor on a TIPSS-2 contract vehicle.

5. AS-IS STATE

5.1. Current Environment

The IRS user communities are currently supported by multiple, distinct IRS Portals. The portals include the Public User Portal (PUP), the Registered User Portal (RUP), the Employee User Portal (EUP), and the Intranet, each with its own infrastructure and governance. They are characterized as follows.

5.1.1. Public User Portal (PUP)

The PUP is the platform upon which numerous applications reside to serve the general public and offer downloadable forms and general tax information. It enables the dissemination of tax forms, instructions, publications, and other tax information free-of-charge to the public. This portal is commonly referred to as IRS.gov and is accessible at http://www.IRS.gov. It does not provide any access to IRS tax account information. However, it does provide links to applications in the Registered-User Portal (RUP).

5.1.2. Registered-User Portal (RUP)

The RUP is the IRS external portal that allows registered individuals and third-party users (registration and login authentication required) and other individual taxpayers or their representatives (self authentication with shared secrets required) to access IRS for interaction with selected tax processing and other sensitive systems, applications, and information. User interactions are encrypted from the user's workstation or system to the portal, across the Internet or via direct circuits.

5.1.3. Employee User Portal (EUP)

The EUP is the internal IRS portal that allows IRS employee users to access IRS data and systems, such as tax administration processing systems, financial information systems, and other data and applications, including mission critical applications. Modernization registration and authentication are required for access to sensitive and mission critical applications, and all user interactions with those systems are encrypted from workstation to portal across the IRS internal network. IRS network authentication is required for access to any materials or services, and is required in order to access modernization registration and authentication.

5.1.4. Intranet

The IRweb serves as the gateway to the IRS intranet. Every IRS employee and IRS organizations are supposed to use IRweb as their default home page for their web browser. IRweb is a very important part of IRS efforts to give employees the tools they need to be more productive. IRweb includes daily news highlights, an index for finding intranet sites and services, and many other features.

5.2. Major Components and Subsystems

5.2.1. Current Business Load

5.2.1.1. Public User Portal

Last year during the peak tax season, the PUP site had 75 to 100 million hits per day with a peak of 127.5 million hits on April 15, 2004. The total hits for the calendar year 2004 were more than 5.7 billion. Total pages viewed exceeded 954 million and visits exceeded 152 million for calendar year 2004. The PUP's maximum bandwidth usage for April 2004 was greater than 235 Mbits/sec. The IRS anticipates that figure will exceed 280 Mbits/sec for April 2005. With servers hosted at two data centers, and redundant hardware configurations at each layer within a site, the technical architecture provides extremely high availability (100 percent uptime) and supports tens of thousands of concurrent users.

Currently the IRS.gov web site consists of approximately 80,000 content items, including 24,000 HTML pages, 39,000 static files, and 12,000 JSP pages. Total web site size is more than 7 GB - approximately 1 GB of HTML and 6.5 GB of static files. Due to the seasonal nature and annual growth of the site, a caching solution was implemented that allows for high performance serving of content during peak seasonal times.

5.2.1.2. Registered User Portal/Employee User Portal

Production on the Registered User Portal (RUP) and the Employee User Portal (EUP) is relatively new, as all projects currently running on these portals were deployed in the last two years. Growth has been, and continues to be exponential. One project has already seen a 60 percent increase in the number of annual transactions. The login authentication side of the RUP for FY 2005 has more than 82,000 users and has processed almost 20 million transactions by March 2005. The self authentication side of the RUP processed 25 million transactions in FY 2004 and has already seen 15 million transactions in the first 6 months of FY 2005.

The EUP currently supports 3,000 internal users. This user base will increase dramatically and is expected to number more than 10,000 users in the next two years. Over 100,000 transactions are executed annually. This represents a small portion of the future expectations for this portal.

In the future, the IRS can expect an increase of two new projects per year on these portals. These new projects would add corresponding user and transactions loads. The associated portal infrastructure must be readily scalable to meet these increasing needs.

5.2.1.3. Intranet

IRweb is the IRS main launch site to all our business unit internal web sites. IRS intranet web sites number between 300-400 main and sub web sites. The sites are knowledge

management libraries with data stores to hold survey data and other data repository capabilities.

5.2.2. IRS Technologies

5.2.2.1. Public User Portal

The IRS.gov web site employs dual-site architecture with global load balancing between locations. At each level of the architecture redundancy was implemented to meet the high level of availability required by the IRS. The architecture leverages a Vignette Content Management Application, Sun Solaris operating system, Oracle databases, BEA WebLogic application server, and SunOne web server. Other architectural components of the IRS.gov site include FTP, Network, Security, Storage and the development, testing, and training environments necessary to support a site of the stature of IRS.gov.

The Verity Ultraseek Search Engine search infrastructure supporting the IRS.gov site, allows for users to perform basic and advanced search capabilities. There are over 20 applications deployed at the site that the IRS.gov architecture supports. Due to the seasonal nature and annual growth of the site, an Akamai caching solution was implemented that allows for high performance serving of content during peak seasonal times. Since implementing the caching solution, the IRS.gov web site moved to number one on the Keynote Government Index, which measures response time of 40 government Internet sites. There is also a reusable eForms LiquidOffice architecture to handle a wide variety of IRS forms. This portion of the site allows registered users to securely communicate information to the IRS.gov site. Interfaces to IRS backend systems were created and allows for two-way flow of information.

5.2.2.2. Registered User Portal/Employee User Portal

The RUP and EUP have similar designs but slightly different security needs as IRS employees have different risk profiles than users from the Internet. Both portals have separate hardware configurations supporting load balancing and Secure Socket Layer (SSL) encryption. There are two zones within each portal; a Web Server Zone, which uses Microsoft Internet Information Services (IIS) and a Web Application Server (WAS) zone. The WAS zone runs WebSphere on Sun Solaris servers. Logon authentication, via User ID and password and role based access control is provided by Netegrity SiteMinder. All authentication and access control occurs in the Web Server Zone via a SiteMinder plug in, which in turn, communicates to a Netegrity policy server located in the IRS backend. User profile information is stored on Computer Associates eTrust directory servers also located on the backend.

Vignette is used in both portals to manage the look and feel and for personalization of the home page (i.e., providing a list of applications the user can access). However, most applications on RUP and EUP are not Vignette enabled.

The RUP and EUP are designed to be horizontally scalable as additional web servers and web application servers can be added. In general, each application is redundantly cloned over two WebSphere server platforms. There are separate file servers using Oracle databases for session persistence, file management, and application storage.

The EUP also contains a Citrix terminal server farm that supports SAP applications. The terminal server was implemented because of IRS standards against the use of fat clients.

Both portals also function as a zone separating the IRS backend from users. The backend contains the tax account and other Sensitive But Unclassified (SBU) data. There is no SBU data persistently stored in either the RUP or the EUP. The portals are in turn sealed off from the backend with restrictive uses of communications protocols and ports.

The IRS has extremely high security and privacy concerns and the design currently reflects this concern. Arguably, security concerns have impacted how IRS can develop and deploy applications. In this regard, the preferred communications method from the portal to the backend is via a messaging service based on IBM's MQSeries.

5.2.2.3. Intranet

IRweb is the IRS main launch site to our business units' internal web sites. The sites are built in Microsoft .NET and Microsoft Content Management System (MS CMS). Login is accomplished using Active Directory. Content management is delivered with standard templates and tools for the customer administration of their web sites.

5.3. Operations As-Is State

IRS operations support is compartmentalized across several groups to include internal and contracted support staff to provide a structured delivery of service. These groups maintain the readiness of desktop configuration, operations of production platforms, and network configuration management. Operations groups and their customers operate based on the standards set forth in service level agreements (SLAs). The processes include change management, production scheduling, normal core business hours operations schedules, maintenance services, and trouble report analysis and defect resolution. Planned facilities outages, 24X7 scheduling, and system upgrades are communicated to the IRS customer base by broadcast e-mails. These services are focused on specific platforms and/or projects.

Platform operations services are designed to provide a standard hosting environment that meets a variety of needs. New project applications are integrated into an existing architectural framework. The framework is maintained and upgraded or enhanced to meet new needs. Any changes or introduction of new portal solutions to the framework are approved based on conformity to architectural standards. Efficient operations of the portal solutions architecture requires proactive monitoring of production, real-time operations, and the end-to-end throughput. Major applications and critical communication paths are monitored for performance risk levels. The monitoring tools

are limited in scope in the type of metrics that are rendered. Metrics are collected and analyzed but could be enhanced to reach the breadth and depth required to address the challenges inherent to size and nature of the IRS architecture.

Operations groups are expected to provide on-site systems administration, notice to customers of downtime, database administration, portal solutions technical development services, testing/lab services, help desk services, telecommunications support and disaster recovery plan, and backup data for restoring the application, database, and other related data in a timely manner. The loss of computerized records related to examinations can have catastrophic consequences to the tax administration process and potentially result in the loss of large sums of current and future revenue. Loss could occur from equipment failure, unauthorized access, inadvertent erasure, terrorist activity, or from any natural event. Data backups and disaster recovery procedures are strictly adhered to, to ensure the security and privacy of taxpayer and employee data. All (IRS-owned) taxpayer, case data and other application data is to be backed up. These operation services are negotiated and outlined in annual service level agreements to include metrics and delivery standards.

5.4. Federal Guidelines

As a U.S. Government entity, the IRS and its technology systems are required to conform with federal guidelines, where applicable. Examples include, but are not limited to:

- The Restructuring and Reform Act of 1998 (RRA 98)
- Section 508 of the Rehabilitation Act (29 U.S.C. ‘ 794d)
- E-Government Act of 2002
- The President’s E-Government Agenda
- The Government Paperwork Elimination Act (GPEA)
- Interagency Committee on Government Information (ICGI) Recommendations
- U.S. National Archives and Records Administration (NARA) Statutes
- Federal Information Processing Standards Publications (FIPS PUBS)

6. DESIRED STATE AND VISION OF THE FUTURE

6.1. Goal

The primary goal of the envisioned IRS enterprise portal is to provide a single point of access to information, services, and applications for all internal and external IRS user communities. While the views for internal and external users will be personalized based upon the role or intent of the end-user, the underlying framework will unify the access to and view of content and data, regardless of the location of the content and data.

6.2. Shared Portal Concept

To focus the design of the future enterprise portal, the IRS will use a shared portal infrastructure to provide a structured approach to developing and integrating portal applications, content, and data for optimal reuse and efficiencies.

The new IRS enterprise portal framework represents a baseline for future systems development at the IRS. The infrastructure behind the portal must be flexible enough to integrate with existing systems, adapt to organizational and technological changes, and be durable enough to stand the test of time. As a layered approach, the shared infrastructure will allow changes to occur to one layer without negatively impacting the other layers. This flexibility will provide the IRS with multiple options on how to transition and eventually implement changes to each of these layers.

6.3. Desired Business Outcomes and Capabilities

The IRS business outcomes or desired end-results are based on IRS goals and objectives, as well as being driven by government directives and environmental market factors. The IRS has identified three core business outcomes that map directly to the goals and objectives laid out in the IRS Strategic Plan: 2005 – 2009:

Goals and Objectives:	Business Outcome:
1. Improve Taxpayer Service	1. Increased customer satisfaction
2. Enhance Enforcement of the Tax Law	2. Increased voluntary compliance
3. Modernize the IRS through its People, Processes, and Technology	3. Increased efficiency through technology utilization and responsiveness

7. RFI RESPONSE

The Government is interested in obtaining the following information from industry to consider when determining its acquisition strategy and development of the Request for Proposal (RFP).

1. How many years of experience does your firm have performing web portal managed services as described in this RFI?

2. What type of web portal services does your organization currently provide?

3. Who are your primary clients and describe the magnitude of their web portal requirements?

4. Have you performed any web portal managed services tasks for the Federal Government or for State Governments? If yes, please indicate the agency/state, contract number, dollar size, the type of work performed, and the contract type for this work. Please provide a point of contact and phone number for each referenced contract.

5. The IRS has extremely high security and privacy concerns. Preventing disclosure of privacy data (e.g., tax account data) is a major factor in any IRS portal design. Describe your experience and best practices in tightly securing a Web Portal including Commercial-off-the-shelf (COTS) policy servers, intrusion detection, and external and internal communications protocols (e.g., RMI/IIOP, DCOM, messaging).

6. Describe your experience in transitioning a diverse multi-site collection of web sites and/or portals into a commonly managed enterprise portal framework and infrastructure. Case histories with timelines and rough cost would be helpful.

7. Describe the portal design practices that you currently use to build and maintain a large-scale enterprise portal. Case histories would be useful.

8. Describe the portal engineering practices that you currently use to build and maintain a large-scale enterprise portal. Case histories would be useful.

9. Describe how you would provide the technical services and meet the workload information indicated in this RFI?

10. Are there new technologies and/or unique approaches your organization can provide to accomplish our objectives as described above? If so, please describe.

11. Does your firm offer guaranteed levels of service supported by contractual Service Level Agreements? If so, please submit any standard Service Level Agreement documentation regarding your services.

12. Does your firm/organization have a standard portfolio of managed service capabilities? If so, please submit a standard pricing list and service description documentation.

13. What approach would you take to interface with the IRS' diverse content management systems, including portal content and other content and data repositories? What is the business value, if any, of pursuing an enterprise content management approach, where the IRS would store content once, in one location and repurpose it to multiple locations on the enterprise portal?

14. Describe your ability to provide personalization functionality to the portal and how it is achieved. Does your approach/software provide the ability to perform roles-based management and personalization by connecting to Enterprise Resource Planning (ERP) systems such as Peoplesoft?

15. Describe an approach and technology to support multilingual content and translation services in the portal. How would this be implemented? Describe best practice business processes for managing content in multiple languages, specifically in ensuring content synchronization for all languages when one language is updated or changed.

16. Describe an approach to plan for and accommodate periodic and sudden increases in bandwidth usage (throughput) associated with technologies such as streaming media/image handling.

17. What approach would you take to ensure that the IRS is operating on the latest or most appropriate versions of software, consistent with a release management strategy that effectively deals with compatibility issues?

18. What standard operating procedures does your firm/organization use to mitigate impacts to a production environment when deploying new applications and upgrades/ enhancements on a continuing basis?

19. Describe your approach in developing a records retention system for a large public web site like IRS.gov that will satisfy all federal requirements/policies relating to records retention.

20. What web analytics reporting systems, practices, and procedures does your company use for very large web sites like IRS.gov? What experience does your firm have with web analytics reporting systems that are hosted by your firm vs. application service providers (ASPs)? What experience does your firm have with external web application monitoring systems?

21. Please provide technology standards you support (i.e., .NET, J2EE, etc.).

22. Describe your systems and development approach. Do you use open source, proprietary written code or a hybrid? What are the business reasons for choosing one over the other?

23. What capacity operations and planning analysis does your company perform to improve the capabilities of platforms and applications?

24. What configuration management practices and procedures does your company use when deploying new components and or applications? What configuration plans or design would you suggest for systems infrastructure to allow flexibility to introduce new components to the platform and the utilization of new COTS products?

25. Describe your corporation's Capability Maturity Model (CMM) level compliance.

26. What testing/lab operations do you conduct in order to test new components and products being deployed to mitigate the impact to the shared infrastructure?

27. What parts of the architectural infrastructure are you able to test to identify risk or triage trouble reporting? Explain the nature of this testing.

28. What type of security architectures does your company have experience in building or maintaining. Please explain the complexity of the architecture and the operations security standards and practices?

29. What performance monitoring tools does your company use to track end-to-end throughput? Define the levels of monitoring you have achieved and describe the size and configuration of the systems.

30. How are tools utilized to identify and analyze trends in trouble reporting? What levels of usage do you get from the performance monitoring data to help resolve performance issues?

31. What products and platforms expertise does your company offer in web technologies, multi-tiered platforms, and load balanced environments?

32. What systems experience does your company have in building and maintaining systems in Windows operating environments?

33. What experience and expertise does your company have in building and deploying platforms that offer infrastructure services such as content management, shared data, work flow, and shared document warehousing?

34. Do you have experience supporting a 24X7 operational environment? What types of service level agreements and maintenance schedules would you recommend to support this type of environment?

35. Have you managed the transition of operational support from another organization to yours? Describe the methods used to effect that transition (e.g., parallel support and cutover, on-the-job training, etc.) and scope of that transition (e.g., length of time, number of support personnel involved, etc.)

36. What experience does your organization have in help desk operations? Have you ever integrated multiple help desks into a single unit? Have you ever delivered a complete help desk solution- COTS or customized? Do you have a preferred methodology for administering a help desk?

37. Describe your approach in designing and delivering disaster recovery and contingency plans for a portal environment. Please discuss recommended redundant and fail over capabilities.

38. What is the business value, if any, of combining the entire web presence of an enterprise into a common portal infrastructure with common user interface and other features? Is this a recognized business practice that provides tangible value to users? How do you integrate COTS products into common user interface features? How could an enterprise leverage such an approach to ensure effective support to employees, customers, partners, and multi-functional elements of the organization?

39. The following non-inclusive list consists of portal services and attributes the IRS has identified as potential capabilities of the enterprise portal. Please address how your approach/software would provide the IRS with this capability. Specifically address where these technologies may be in the next two to three years.

    a. Channel Management
    b. Transformation
    c. User Interface and Personalization, including intention-based (not tracked – non-registered users) and role-based (registered users)
    d. Navigation and Search
    e. Taxonomy
    f. Collaboration and Workflow, including online synchronous communications (instant messaging, webinars, chat rooms, white boarding, collaborative review, application sharing) and asynchronous communications (discussion boards, online surveys).
    g. Workspace productivity tools, including calendars, distribution lists, task list management, and resource management
    h. Processing, including assistants and online guides, online FAQs, contact profile management, online submissions, status tracking, notification, and reporting and analysis
    i. Enterprise Content Management, including Document Management, Digital Asset Management, Web Content Management, Records Management and Retention, Multi-Lingual and Translation Support.
    j. Rapid Application Development
    k. Web Analytics
    l. Business Intelligence
    m. Single sign-on identity management
    n. Remote access
    o. Security Utilities, including registration, identification and authentication
    p. Portal Administration
    q. Syndication of content
    r. Multimedia (i.e. streaming video, voice of internet protocol (VoIP), images)